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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/820,334 | 04/08/2004 | James J. Callas | 02-440 | 8551 |

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CATERPILLAR INC.
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PATENT DEPT.
PEORIA, IL 616296490

EXAMINER

WALTERS, JOHN DANIEL

| | |
|----------|--------------|
| ART UNIT | PAPER NUMBER |
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3618

DATE MAILED: 05/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|-------------------------------|----------------------------------|--|
| Office Action Summary | Application No. 10/820,334 | Applicant(s) CALLAS, JAMES J. | |
| | Examiner John D. Walters | Art Unit 3618 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 March 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3,4 and 6-20 is/are pending in the application.
 4a) Of the above claim(s) 11-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3,4 and 6-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claims 1, 3, 4, and 6 – 20 have been examined. Claims 11 – 20 have been withdrawn by Applicant via an election restriction.

Election/Restrictions

Newly submitted claims 11 – 20 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: See original restriction requirement dated 8/23/2005.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 11 – 20 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3, 4 and 6 – 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kraina (4,071,009), cited by Applicant. Kraina discloses a cooling system for a vehicle comprising:

(re: claim 1) a cooling system enclosure (Fig 1, item 25; column 2, lines 40-43) being positioned in the vehicle, an engine enclosure (Fig 2, item 11, taken as comprising sidewalls 18 and 19 and rear wall 20) being positioned in the vehicle, the engine enclosure being aft of the cooling system enclosure (the "aft" position being inferred from the disclosure at column 2, lines 34-38, which states that the hinges 21 and 22, shown in Fig 3 are on the rearward ends of the sidewalls 18 and 19), the engine enclosure being adapted to partially cover the engine (10); and, a partition (Fig 2; taken as the structure comprised of items 26, 27 and 28) between the radiator (13) and the fore portion of the engine (10) separating the engine enclosure and the cooling system enclosure, the partition being adapted to substantially block a mass of ambient air from flowing through the cooling system enclosure and the engine enclosure (column 2, lines 44-61); and,

(re: claim 3) including a connecting member between the cooling system enclosure and the engine enclosure (see Fig 3; taken as item 46 which connects the radiator and engine and is seen to extend between the cooling system enclosure and the engine enclosure; including a cooling conduit positioned in said connecting member (taken as the interior of item 46 which conducts the engine cooling water (column 3, lines 55-59); and,

(re: claim 4) further including a means (13) for cooling a fluid positioned in said cooling enclosure; and,

(re: claim 6) further including a fan (12) positioned aft of the means (13) for cooling; and,

(re: claim 7) further including a shroud (Fig 2, item 28) positioned aft of the heat exchanger, the shroud being adapted to direct the mass of air away from the partition (as shown by the lower arrows "A"); and,

(re: claim 8) wherein (see Fig 2) an enclosure aft portion of the cooling system enclosure (25) has a height greater than a height of an engine fore portion of the engine enclosure (taken as the fore portion of 26); and,

(re: claim 10) further including a means, i.e. air scoop, (Fig 2, item 38 and Fig 3, item 41 and column 3, lines 33-45) for inducing additional ambient air and at least one vent (Fig. 3, items 29 and 31).

Regarding the further features of claim 1 wherein the cooling system enclosure is positioned in a fore portion of the vehicle and wherein the engine enclosure is positioned in the fore portion of the vehicle, Kraina is silent. However, as the Examiner took Official Notice in the previous action, which was not traversed, it is taken as common knowledge in the automotive arts to position vehicle engines and cooling systems wherever advantageous in the vehicle design, including locating them in the fore portions of vehicles so that it would have been obvious to one of ordinary skill in the art at the time the invention was made to have positioned the engine and its associated cooling system in the fore portion of the vehicle in order to take advantage of the ram air effect to drive the additional cooling air around the engine when the vehicle is moving forward.

Regarding the features of claim 9, Kraina's partition is comprised of connected parts rather than being integral with the engine enclosure.

However, it would have been obvious to one of ordinary skill in the art at the time the instant invention was made to have made the partition integral with the engine enclosure rather than made of separately connected parts connected with the engine enclosure since it has been held that forming in one piece an article which has formerly been formed in multiple pieces and put together involves only routine skill in the art. *Howard v. Detroit Stove Works*, 150 U.S. 164 (1893).

Response to Arguments

Applicant's arguments, see first page of remarks, filed 3/13/2006, with respect to the abstract have been fully considered and are persuasive. The objection of 12/14/2005 has been withdrawn.

Applicant's arguments, see first page of remarks, filed 3/13/2006, with respect to the drawings have been fully considered and are persuasive. The objection of 12/14/2005 has been withdrawn.

Applicant's arguments, see first page of remarks, filed 3/13/2006, with respect to the specification have been fully considered and are persuasive. The objection of 12/14/2005 has been withdrawn.

Applicant's arguments, see second page of remarks, filed 3/13/2006, with respect to claim informalities have been fully considered and are persuasive. The objection of 12/14/2006 has been withdrawn.

Applicant's arguments filed 3/13/2006 with regards to 35 U.S.C. § 103 have been fully considered but they are not persuasive.

Applicant states, "Claims 1-10...Kraina...cited reference clearly shows an apparatus in which a portion of the ambient air that passes through the cooling system is also guided to flow around the engine...Applicant's claims invention...directed to the concept of separate cooling system and engine enclosures that do not share a common air flow path...should be no dispute that the cited reference shows and teaches a different structure..."

The cited prior art reference, Kraina, discloses the structures and limitations as currently stated in Applicant's claims. See the above rejection for specifics.

Conclusion

The prior art made of record and not relied upon is considered pertinent to Applicant's disclosure: The prior art of Falk et al.; of Bland; of Acre et al.; of Gielda et al.; of Kircheweger; of Boll et al.; of Weidmann et al.; of Yura; of Peter; of Skatsche et al.; of Fachbach et al.; and of Isaka each show features in common with some of the other structures of the inventive concept disclosed in the instant application.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John D. Walters whose telephone number is (571) 272-8269. The examiner can normally be reached on Monday - Friday, 8am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher Ellis can be reached on (571) 272-6914. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JDW

A handwritten signature in black ink, consisting of the letters 'JDW' inside a circular flourish.

John D. Walters
Examiner
Art Unit 3618

A handwritten signature in black ink, appearing to be 'C. P. Ellis', written in a cursive style.

CHRISTOPHER P. ELLIS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600